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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* TOSHIAKI SHIMADA,  
HIDEO OHIRA and KENICHI ASANO

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Appeal 2007-3664  
Application 09/210,775  
Technology Center 2800

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Decided: October 29, 2008

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Before KENNETH W. HAIRSTON, MAHSHID D. SAADAT  
and KEVIN F. TURNER, *Administrative Patent Judges*.

HAIRSTON, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from a final rejection of claims 1 to 14. We have jurisdiction under 35 U.S.C. § 6(b).

We will sustain the obviousness rejection.

Appellants have invented a moving picture encoding system that includes an encoding control means that encodes each picture in a sequence

of moving pictures formed in a unit group. When the unit group of moving pictures includes a plurality of different types of pictures that require encoding by different encoding methods, the encoding control means sets a target quantizer step size that is used to encode each of the different types of pictures included in the unit group. A ratio among the target quantizer step sizes that are set for the different picture types is predetermined. The control operation performed by the encoding control means is not totally dependent on an allocation of quantity of a target amount of codes based on a global complexity measure for each of the pictures, but is performed in according with features of the sequence of moving pictures (Fig. 1; Spec. 9 to 12, 18, 19, and 42 to 44).

Claim 1 is the only independent claim on appeal, and it reads as follows:

1. A moving picture encoding system for encoding each picture included in a sequence of moving pictures in units of a unit group comprised of a plurality of pictures including said each picture, said system comprising:  
encoding control means for, when said unit group includes a plurality of different types of pictures which are to be encoded with different encoding methods, setting a target quantizer step size used to encode each of the different types of pictures included in said unit group, and for performing a control operation to generate and furnish a quantizer step size so that a ratio among the target quantizer step sizes set for the different picture types is a predetermined one, said control operation not being totally depending on the allocation of quantity of the target amount of codes based on the global

complexity measure for each of the picture, but in accordance with features of the sequence of moving pictures; and

encoding means for encoding said each picture included in said sequence of moving pictures including said each picture using said quantizer step size furnished by said encoding control means and using either said each picture or prediction from a past intra-coded image and/or a predictive coded picture.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Odaka	US 5,317,397	May 31, 1994
Lee	US 5,592,226	Jan. 7, 1997

The Examiner rejected claims 1 to 14 under 35 U.S.C. § 103(a) based upon the teachings of Odaka and Lee.

### ISSUE

Appellants contend *inter alia* that the applied references lack a teaching of an encoding control operation that is performed in accordance with features of the sequence of moving pictures (Br. 7, 13, and 14). Thus, the issue before us is whether or not the applied references teach or would have suggested to one of ordinary skill in the art the claimed feature of an encoding control operation being performed in accordance with features of the sequence of moving pictures?

### FINDINGS OF FACT

1. As seen in Figure 1 of Appellants' drawing, the claimed encoding control operation is performed by the encoding control unit 14, and the encoding is performed by the encoding unit 6.

2. The Examiner has made findings that Odaka describes all of the moving picture encoding system with the exception of the control operation of the encoding control means being performed ““in accordance with features of the sequence of moving pictures”” (Ans. 3, 4, and 7).

3. The Appellants have not challenged the Examiner's findings in finding of fact number 2 (Br. 7 and 15).

4. Odaka describes a moving picture encoding system (Fig. 17) for encoding each picture included in a sequence of moving pictures of a unit group comprised of a plurality of pictures (col. 15, ll. 1 to 34). The system includes an encoding control means 717 that sets a target quantizer step size used to encode each of the different types of pictures (i.e., I, P, and B) included in a group of pictures (GOP) (col. 15, ll. 35 to 48). The encoding control means 717 generates and furnishes a quantizer step size so that a ratio among the target quantizer step sizes set for the different picture types is a predetermined one (col. 15, ll. 48 to 53). As acknowledged by Appellants in findings of fact 2 and 3, the encoding control means 717 in Odaka is not “totally depending on the allocation of quantity of the target amount of codes based on the global complexity measure for each of the picture.” (Br. 8)

5. Appellants repeat the phrase “feature of the sequence of moving pictures” throughout the disclosure, but do not give specific examples of

what is considered a “feature” or “features” of the sequence of moving pictures (Spec. 9 to 11, 33, 39, 41, and 42). One feature of the sequence of moving pictures may be the amount of motion between pictures (Spec. 11, and 42 to 44).

6. Odaka is concerned with the amount of motion between pictures (col. 14, ll. 13 to 63).

7. Lee was cited by the Examiner for a teaching of determining distances between frames and motion between frames (col. 19, ll. 48 to 61) in a group of pictures (GOP) (col. 20, l. 39 to col. 21, l. 52) “to adapt to the changing scene complexity found within a sequence of moving pictures (i[.].e. group of pictures) to be encoded (col. 35, lines 20-22)” (Ans. 7 and 8).

## PRINCIPLES OF LAW

The Examiner bears the initial burden of presenting a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). If that burden is met, then the burden shifts to the Appellants to overcome the prima facie case with argument and/or evidence. *See Id.*

The Examiner’s articulated reasoning in the rejection must possess a rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

During ex parte prosecution, claims must be interpreted as broadly as their terms reasonably allow since Applicants have the power during the administrative process to amend the claims to avoid the prior art. *In re Zletz*, 893 F.2d 319, 322 (Fed. Cir. 1989).

“An obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of a case.” *Leapfrog Enterprises Inc. v. Fisher-Price Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007).

The test for obviousness is what the combined teachings of the references would have suggested to the artisan. Accordingly, one can not show nonobviousness by attacking references individually where the rejection is based on a combination of references. *In re Keller*, 642 F.2d 413, 425 (CCPA 1981).

#### ANALYSIS

For all of the reasons expressed by the Examiner (Ans. 3 to 10), and for the additional reasons set forth *infra*, we agree with the Examiner that the claim 1 moving picture encoding system is either taught by or would have been suggested by the applied references.

We agree with the Examiner’s conclusions that Odaka discloses the system structure set forth in claim 1, and that Odaka never specifically states that the control operation of the encoding control means 717 is in accordance with features of the sequence of moving pictures (Ans. 4) (Findings of Fact 2 to 4). Notwithstanding the Examiner’s findings, when the claim is given its broadest reasonable interpretation consistent with Appellants’ disclosure, we find that the motion between frames in Odaka is a specific recitation of a “feature” of the sequence of moving pictures (Findings of Fact 5 and 6). *In re Zletz*, 893 F.2d at 322 (Fed. Cir. 1989). As indicated *supra*, a “feature” of the sequence of moving pictures in Lee is also motion between frames (Finding of Fact 7). Thus, we agree with the

Examiner that it would have been obvious to the skilled artisan based upon the teachings of the applied references for the encoding control means in Odaka to operate “in accordance with features of the sequence of moving pictures” as set forth in claim 1 on appeal (Ans. 5, 8, and 9).

Appellants’ arguments (Br. 13 and 14) concerning the shortcomings in the teachings of Lee are not convincing of the nonobviousness of the claimed invention set forth in claim 1 because one can not show nonobviousness by attacking references individually when the rejection is based on a combination of references. *In re Keller*, 642 F.2d at 425 (CCPA 1981).

Appellants’ arguments concerning lack of motivation and impermissible hindsight are without merit in view of the teachings of the applied references (Br. 14 to 17).

Appellants have not presented patentability arguments for dependent claims 2 to 14 apart from those presented for independent claim 1.

In view of the teachings of the applied references noted *supra*, Appellants’ arguments are not convincing of the nonobviousness of the claimed invention since the skilled artisan is presumed to possess the skill to appreciate that the applied references are both concerned with the same “feature” of the sequence of moving pictures. *Leapfrog Enterprises Inc. v. Fisher-Price Inc.*, 485 F.3d at 1161 (Fed. Cir. 2007).

In summary, Appellants’ arguments throughout the brief do not convince us of any error in the Examiner’s positions in the rejections. *In re Oetiker*, 977 F.2d at 1445 (Fed. Cir. 1992). The Examiner’s rationale for combining the teachings of the references involves nothing more than

common knowledge and common sense in the art. *In re Kahn*, 441 F.3d at 988 (Fed. Cir. 2006).

#### CONCLUSION OF LAW

The Examiner has established the obviousness of claims 1 to 14.

#### ORDER

The obviousness rejection of claims 1 to 14 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

#### AFFIRMED

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BIRCH STEWART KOLASCH & BIRCH  
P. O. BOX 747  
FALLS CHURCH, VA 22040-0747